



SOUTH FORK FLATHEAD RIVER DRAINAGE

PHYSICAL DESCRIPTION

The South Fork Flathead River drainage includes Hungry Horse Reservoir, the South Fork Flathead River and its tributaries. The South Fork originates from the Bob Marshall Wilderness, at the confluence of Young's Creek and Danaher Creek. From its headwaters, the river flows north for approximately 60 miles through the Bob Marshall Wilderness before entering Hungry Horse Reservoir. Hungry Horse Dam, created in 1953, lies approximately 5.3 miles upstream of the confluence of the South Fork and the main stem of the Flathead River. At 564 feet, Hungry Horse was the third largest and second tallest concrete dam in the world at the time of completion. The dam is managed for hydroelectric production as well as for flood control. The South Fork Flathead watershed includes some of the most pristine forested landscape in the western United States. The majority of the land base in the South Fork drainage is publicly owned, with land management responsibilities belonging to the Flathead National Forest. The vast majority of this National Forest land is protected as wilderness, though there are roaded parcels around Hungry Horse Reservoir.

There are 62 natural lakes in the drainage, totaling 2,308 surface acres. The South Fork drainage is bordered by the Swan Mountains to the west and the Flathead Range to the east. The natural lakes present in the South Fork drainage are typically mountain lakes in the headwaters of many South Fork tributaries. The largest natural lake is Big Salmon Lake (972 acres). Few lower elevation lakes exist, with Handkerchief Lake (51 acres) being one of the larger, more popular destinations.

FISHERIES MANAGEMENT

The South Fork Flathead River drainage provides one of the most unique fisheries in Montana. Construction of Hungry Horse Dam left almost the entire South Fork isolated from the remainder of the Flathead system. Because of this isolation, the South Fork provides for an entirely native fish assemblage, with outstanding fisheries for westslope cutthroat and bull trout. The South Fork represents the largest connected population of migratory, genetically unaltered westslope cutthroat trout left in the United States. Anglers in the South Fork will find exceptional catch rates for large cutthroat in an area that provides solitude and scenery that make Montana the last best place. In addition to westslope cutthroat, anglers visiting Hungry Horse Reservoir and the upstream South Fork also have the unique opportunity to target bull trout, a species listed as threatened under the Endangered Species Act. While most waters were closed to fishing for bull trout after the listing in 1998, the South Fork drainage was reopened under a permit from the USFWS in 2004. The conditions of this permit allowed for catch and release fishing for bull trout in the South Fork Flathead River and angler harvest of two bull trout per year in Hungry Horse Reservoir. The bull trout population in Hungry Horse and the connected South Fork is typical of most adfluvial populations and anglers have the chance at targeting bull trout up to 15 pounds.

The South Fork drainage is managed as a wild, native trout fishery, emphasizing natural reproduction. The basin is also the focus of native fish recovery efforts. The South Fork drainage is home to many native fish species including bull trout, westslope cutthroat trout, mountain whitefish, pygmy whitefish, northern pikeminnow, longnose and largescale sucker, and sculpin. The only non-native fish species present in the South Fork is Arctic grayling, although this species is limited to Handkerchief Lake, which once held the state record for angler-caught grayling. Regulations in the wilderness portion of the South

Fork protect against overharvest and maintain a viable recreational angling experience while allowing the adventurous anglers to enjoy a camp meal of freshly caught trout. Guided float trips exist on the South Fork, though outfitting is regulated through a permit system administered by the USFS. The remote nature of the upper South Fork largely limits the number of anglers utilizing the river. However, anecdotal evidence suggests that angler use may be increasing and future surveys may determine the need for additional regulation.

The fishery downstream of Hungry Horse Dam provides for a limited tailwater section, though access is difficult due to steep banks and swift current. This section of river is dominated by native fish species, though rainbow and lake trout have been observed in this location. Historically, water exiting Hungry Horse Dam was released from the bottom of the reservoir, altering the stream temperature for the rest of the Flathead River downstream of the confluence with the South Fork. However, in 1995 a selective withdrawal system was installed and has since provided a more natural temperature regime. In recent years the occurrence of the diatom algae *Didymosphenia geminata* appears to have increased below Hungry Horse Dam. Scientists are currently investigating the potential impacts of the increase in diatom density.

High mountain lakes in the South Fork were historically stocked with cutthroat trout. However, modern genetic analysis has revealed that many of these cutthroat trout plants in the early part of the 20th century had genetic material other than westslope cutthroat trout. Since the 1980's any lakes stocked have been with genetically pure westslope cutthroat from the Washoe Park State Fish Hatchery. In 2007, FWP implemented a watershed-wide restoration project aimed at removing these headwater sources of non-native genes and therefore protecting the important population of the South Fork.

HABITAT

The South Fork Flathead River drainage contains some of the most pristine forest land in the lower 48 States. Much of the watershed is located within the Bob Marshall Wilderness. When combined with the neighboring Scapegoat and Great Bear Wilderness areas, the Bob Marshall Wilderness Complex is the second largest wilderness-protected land area in the lower 48 with over 1.5 million acres. Because of this level of protection, fisheries habitat remains largely in the same condition as it was prior to human civilization. Migratory fish populations thrive in connected stream networks with little man-made disturbance.

Downstream of the wilderness boundary the drainage is still largely publicly owned, with the USFS responsible for land management. As is the case with many managed forests, years of timber harvest have left a legacy of roads upon the landscape. However, while historic logging practices may have negatively impacted streams and their associated fisheries, modern forestry Best Management Practices and conservation efforts have greatly improved fisheries habitat from its previous condition. Fish passage has been provided at road crossings on either side of Hungry Horse Reservoir, maintaining connection to spawning and rearing habitat for fish inhabiting the reservoir. Funding for this restoration work has come from both BPA mitigation as well as USFS funding sources.

FISHING ACCESS

Although there are abundant recreational fishing opportunities in the South Fork drainage, FWP has no official fishing access points. Access points along both the South Fork Flathead River and Hungry Horse Reservoir are managed by the USFS. These sites include a combination of primitive boat launches and

dispersed camping as well as developed campgrounds and boat ramps designed to handle considerable traffic.

Special Management Issues

South Fork Flathead Drainage Westslope Cutthroat Trout Conservation Program

The South Fork Flathead River drainage comprises more than half of the remaining interconnected habitat for westslope cutthroat trout within this species' historic range. However, long-term persistence of this native species is threatened by hybridization with introduced rainbow trout and Yellowstone cutthroat trout that were stocked decades ago in many historically fishless headwater lakes in the South Fork drainage. In an effort to minimize the spread of hybridization, Montana Fish, Wildlife, and Parks developed the South Fork Flathead Drainage Westslope Cutthroat Trout Conservation Program. The objective of this multi-year project is to remove sources of nonnative trout in 21 lakes and reestablish these fisheries with pure westslope cutthroat trout. To date, rotenone has successfully been used to chemically remove introduced trout in ten lakes and genetic swamping is being used in an additional six lakes as an alternative technique to restoring westslope cutthroat trout. Additional efforts in the South Fork Flathead include the development and use of local broodstocks to conserve genetic variation in this native species.

Fisheries Management Direction for South Fork Flathead River Drainage

| Water | Miles/acres | Species | Origin | Management Type | Management Direction |
|--|--------------|---------------------------|-------------------|---------------------------------------|--|
| South Fork Flathead River and Tributaries (Headwaters Downstream to the Wilderness Boundary) | 40 Miles | Bull trout | Wild | Conservation/ Special Regulations | Manage for catch-and-release angling through a catch-card permit system. |
| | | Westslope cutthroat trout | Wild | Conservation/ Special Regulations/ | Maintain numbers and quality of the fishery. Provide a limited harvest fishery allowing anglers to keep small fish for camp fare while maintaining large fish and spawning fish. Eliminate threats to genetic purity. Monitor westslope cutthroat trout for increases in hook scar rates and catch rates related to increases in angler use. |
| | | Mountain whitefish | Wild | General | Maintain numbers. Begin to understand population size and trend. |
| South Fork Flathead River and Tributaries (Wilderness Boundary to Hungry Horse Reservoir) | 20 Miles | Bull trout | Wild | Conservation/ Special Regulations | Manage for catch-and-release angling through a catch-card permit system. |
| | | Westslope cutthroat trout | Wild | Conservation/ Special Regulations | Provide a limited harvest fishery. Conduct population estimates as part of evaluation of the effectiveness of the short catch-and-release section. Eliminate threats to genetic purity. |
| | | Mountain whitefish | Wild | General | Maintain numbers. Begin to understand population size and trend. |
| Spotted Bear Lake | 12 Acres | Westslope cutthroat trout | Wild/ Hatchery | Put-Grow-Take | Provide for harvest and recreational opportunity. Continue to monitor for stocking evaluation. Plants appear to have poor success in recent years. |
| Hungry Horse Reservoir Continued on next page | 23,577 Acres | Bull trout | Wild | Conservation/ Special Regulations | Regulate harvest and monitor migratory populations for conservation and angling through a catch card system. |
| | | Westslope cutthroat trout | Wild | Conservation | Provide recreational angling opportunity. Eliminate threats to genetic purity |
| | | Mountain whitefish | Wild | General | Provide recreational angling opportunity |

| Water | Miles/acres | Species | Origin | Management Type | Management Direction |
|---|-------------------------|---------------------------|-------------------|--------------------------------|---|
| Habitat needs and activities: Improve habitat to reduce disturbance, minimize future threats, and provide ecosystem function. | | | | | |
| Handkerchief Lake | 51 acres | Westslope cutthroat trout | Wild | Conservation | Provide recreational angling opportunity. Eliminate threats to genetic purity |
| | | Arctic grayling | Wild | General | Provide for harvest and recreational opportunity. |
| Habitat needs and activities: Lake is scheduled for rotenone treatment as part of the South Fork Flathead Westslope Cutthroat Conservation project. Grayling and pure westslope cutthroat will be re-stocked after treatment. | | | | | |
| South Fork Flathead River Drainage - Mountain Lakes | 60 lakes 2,245 acres | Westslope cutthroat trout | Wild/ Hatchery | Conservation/ Put-Grow-Take | Eliminate sources of non-native trout to protect genetic purity of westslope cutthroat in the drainage. Provide recreational fishing opportunity for a variety of fish sizes and catch rates. |

